

MIND AND VOICE

W.D. MacFarlane

PRINCIPLES AND METHODS

IN VOCAL TRAINING

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PREFACE

In all departments of education teachers are suffering from misuse of the voice. Aside from hindrance to the progress and injury to the health of pupils, most teachers fail to do their best work from lack of control of the organic instrument which all must use. Many preachers shorten their lives, to say nothing of the loss of efficiency, from causes which could be remedied by a little attention to vocal training and expression. Over thirty years ago I stood before an audience, in the middle of an address, unable to speak a word for some minutes. The horror of those moments has never been blotted from memory. That failure was a climax of several years, during which I had sought help from over twenty teachers. I determined to search still more diligently to find the cause of my condition. I made earnest studies in this country and in Europe. As I begun to grasp the problem, sufferers begun to come to me, and I was led to give my life to endeavors to do for others what was not done for me.

I owe much to my teachers — to Dr. Alexander Graham Bell, who first inspired me with the possibility of a science of voice, and to his father, Alexander Melville Bell, who helped me to conquer many defects, and to the elder Lamperti, of Milan, who instilled into my heart the spirit of the old masters of song.

No one, however, must be held responsible for the views here expressed. Good or bad, they are the product of my own observations and experiences during thirty years of earnest study.

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The general reader will doubtless feel that there are too many exercises, but to me the exercises are the necessary means of demonstration. These have also been arranged to aid teachers who are often compelled to change the point of view and to assign different exercises to different students according to individual needs.

To those who believe that more attention should be given in modern education to expression and the use of the voice and especially to the few who have sustained me in my efforts to advance the neglected but important subject of Vocal Training and Expression, the work is committed with the hope that it may prove helpful.

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MIND AND VOICE

I

SOME PRIMARY PRINCIPLES

I. METHOD OF INVESTIGATION

While alone in his garden Sir Isaac Newton saw an apple fall, and the idea came to him that the same force which draws the apple to the earth holds the moon in its place. To the philosopher this idea became the basis of long years of investigation, calculation, and experiment. At last he established the truth of his theory so firmly that it has ever since been accepted as the law of gravitation.

Whether history or fable, this story illustrates the method of scientific investigation named in Newton's honor. Great as are the laws which he established, "his example of the manner of establishing them," according to Professor Jevons, "is greater still."¹

The mode of investigation which follows Newton's example is usually accepted among scholars and investigators as the "scientific method." It may be formally outlined in a few words:

1. A preliminary observation of the fundamental condition underlying some phenomenon.
2. A statement as a temporary hypothesis of this supposed explanation or guess as to the cause.
3. Careful and extended observation and experiment regarding all the possible applications of this theory for its confirmation or disapproval.

¹ The Principles of Science, W. S. Jevons, Vol. II, p. 227.

4. A conclusion as to its truth or untruth.

A different method called the Baconian, denies the help of a hypothesis, and observes phenomena without any theory as to their causes.

The ablest authorities, when the two methods must be directly compared, contend that Newton's example has been followed, consciously or unconsciously, by nearly all leading investigators since his day. It is not too much to claim that the great discoveries of modern times have been achieved by his method.

The two, however, are not in such strong contrast as is often thought. One who follows the Newtonian method must continually study the facts to form some hypothesis. Even after one has been formed, he often observes various conditions and facts without any reference whatever to his supposition. On the other hand, one who professes to follow the Baconian method must frequently use his imagination, for he is continually looking for results and principles, and cannot help guessing as to explanations or watching for confirmation of specific expectations. Often a guess must stand as a tentative explanation during investigation. Both the Baconian and the Newtonian, or any scientific method, imply patience, perseverance, teachableness, and an honest endeavor to find the truth at all times and at all hazards.

I. IS THERE A SCIENCE OF VOICE?

When can the knowledge of any subject be called a science? Although Halley's comet had not been seen for seventy-five years the time of its reappearance was foretold. Such predictions cause us to pronounce mathematics a science. The power of prediction is one of the tests.

If loss of voice or nervous prostration can be foretold of some speaker years beforehand, on account of a

peculiar use of the voice, would this indicate scientific knowledge?

Another test is afforded by such a knowledge of causes as will enable one to produce or to change phenomena, effects or conditions. Because one can analyze water into its elements or combine oxygen and hydrogen in certain proportions in a way to form water we speak of the science of chemistry.

A teacher is weary, nervous, has headache and sore throat after teaching all day. Medicine, physical training, out-door exercise, and even a vacation, only palliate the symptoms; but one with the requisite knowledge and insight, by a course of carefully prescribed exercises, corrects certain abnormal vocal actions and conditions, establishes certain normal ones, and thus relieves such a condition permanently. Do such facts indicate a science of voice?

Some think it is merely the intuition of a peculiar type of mind. Others believe that such results are accomplished by experience without knowing any principle underlying such work.

Possibly the strongest test of the possession of a science is the knowledge of certain fundamental elements or principles by means of which the phenomena are explained or brought into such unity that fundamental or primary elements can be distinguished from accidental or secondary ones.

To apply the scientific method to the voice implies the finding, stating, and proving of some principle or principles which will explain the difference between a right and a wrong use of the voice.

For such a discovery it is necessary to observe carefully the facts regarding tone production. Any apparent explanation must be held temporarily to guide us during prolonged investigation and comparison.

It must be conceded at the outset that there are many

difficulties in the way of establishing a true science of producing tone. The voice is closely related to life and character; its modulations are directly united to thinking and feeling; it is subjective; its processes are subconscious. Many of the muscles concerned in its production are often involuntary or only semivoluntary. The organs that produce it are among the most vital of the human body. Moreover, since everyone has been using his voice all his life without serious thought, habits have been formed which, however abnormal, seem natural to the individual himself. Misconceptions regarding the voice are almost universal; wrong and injurious methods are widely prevalent. People in general regard primary conditions of voice as insignificant and its right use as unimportant. Can methods applied so directly to objective facts be of service in investigating such a complex and neglected subject?

All scientific inquiry, however, is difficult. Even the hour of the transit of Halley's comet across the face of the sun could not be told exactly, though that of the moon or earth in an eclipse can be calculated to the minute. Nearly all the sciences are limited. Many theories are held tentatively. Readjustments are continually taking place because of the discovery of new facts.

Through scientific inquiry, however, fundamental principles have been discovered underlying the most complex and difficult phenomena. Why then should we not seek to understand the use of the voice?

It is not the hope to establish scientific principles so that anyone without study can teach the difficult subject of the voice. Intuitive insight is always necessary; long experience and patience are required to develop the power of improving the voice. Vocal training is necessarily an artistic process.

All art, however, is based upon science. The sculptor must have a knowledge of anatomy; the painter is not

hindered by knowledge of color; geometry and mathematics are necessary to the architect. The art of vocal training depends upon a thorough knowledge of certain fundamental principles. The teacher must know the causes of certain conditions and be able to explain them. He must understand why he prescribes various exercises or his work will be uncertain. If such principles can be found the art of vocal training can be based on scientific knowledge.

II. PRELIMINARY HYPOTHESIS.

As a first step let us observe some specific voice action with great care in order to approach as nearly as possible to some primary element or explanation that may serve as a hypothesis. Next, let us apply this to other cases, that we may confirm or disprove its universal application.

Thirty years ago, while investigating the case of a preacher, who, by misuse of his voice, had acquired a chronic congestion of his pharynx, I thought I found a clew to a fundamental condition. I have followed up that preliminary observation with those of several thousand cases, and have studied both the presence and the absence of the condition in all classes and professions. I have found it universally present in normal uses of the voice, and either absent or vitiated in faulty or abnormal ones. By establishing this condition through the practice of exercises serious faults have been removed and abnormal conditions corrected.

The discovery of this principle has led to that of other truths akin to it, but with broader and deeper applications.

In accordance with this method, and as a specific instance of the use of the voice, picture a child playing in the street as an automobile whirls around a corner, and suppose that to save the life of the child you give a sudden shout of warning.

In uttering the exclamation many things may be done.

You may throw up one or both hands, or wave your cane; you may rush forward; but none of these actions are necessary to the cry. A hundred such accidental movements will give us no clew to the primary or necessary conditions of the shout. We find, if we observe ourselves at the moment of shouting, that we take breath and become active in the middle of the body, while the throat or tone passage simultaneously relaxes and opens. Further study will reveal the fact that without these conditions a shout is impossible.

Certain persons indeed are utterly unable to shout under such circumstances. With such the activity in the middle of the body and the simultaneous passivity of the throat do not result from discovery of the situation.

Observation of the elements of such an isolated instance furnishes a hint as to one condition underlying the normal basis of tone production, and we form a hypothesis which may be stated as follows:

Preparation for tone implies a direct response of the body to the mind immediately before the tone is produced. This response consists in taking breath resulting in a sympathetic elastic fullness or activity in the middle of the body, and a simultaneous passivity and opening of the throat or tone passage. Wherever these conditions are reversed, or in any way interfered with, there will be imperfect tone production, and whatever tends to establish them will make the voice easy, natural, and strong.

Although this principle can be so easily stated it required years for its discovery, and the student may at first be skeptical, on the one hand, or, on the other, may accept it too carelessly, and thus fail to realize its full significance. Many in practicing merely pull down the jaw in union with breathing; but the opening of the tone passage cannot be voluntary. It must result from co-ordination of the nerve centers, and must be spontane-

ous. When the breath is cramped or used carelessly, or is managed at the wrong part of the thorax, the throat will be simultaneously cramped. It will require, accordingly, patient perseverance in the practice of some simple exercises to restore this fundamental condition when it has been lost or perverted, and to secure that right accentuation which will give strength, freedom, and richness to the voice.

III. OBSERVATION AND COMPARISON.

We must be careful at first not to state such a hypothesis as a law. Serious mistakes in science have been made from taking without sufficient experiment such a guess, or seeming clew, as an established principle. Any observation which leads to the formation of such an hypothesis is important, but the basis or test of the scientific method comes in the patient investigation into whether this is an accidental, a mere phase of some extreme use of the voice, or whether we have found an essential condition of every expressive vocal action.

1. Observe first, that in certain isolated words or commands, such as "hence," "no," "halt," "stand," or "fire," these conditions are present. Note the difference between one who speaks such words as "yes" and "no" well and one who utters them imperfectly, and you will find that such conditions exist in proportion to the agreeable character of the tone and the ease with which the speaker produces it.

2. Observe especially such involuntary uses of the voice as laughter, sighing, or sobbing, or any sudden tone due to some intense joy or pain. In all these, among many differences due to personal peculiarities, to the situation, to the degree of control and temperament, we find one universal fact—the presence of our supposedly fundamental condition.

As a more specific study of these involuntary vocal



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